

REMARKS

Claims 1, 3-5 and 7-30 are pending in this application. By this Amendment, claims 1, 3, 5, 9, and 10 are amended, as are drawing sheets 9/25 and 15/25 containing Figs. 9 and 15, respectively. Claims 23-30 are added. Claims 2 and 6 are canceled without prejudice to, or disclaimer of, the subject matter recited by those claims. Reconsideration based on the above amendments and the following Remarks is respectfully requested.

Applicants appreciate the courtesies shown to Applicants' representative by Examiners Cleary and Rinehart in the February 10, 2004 personal interview. Applicants' separate record of the substance of the interview is incorporated into the following Remarks. Specifically, claims 1, 5 and 9 are amended to comply with the Examiners' helpful suggestions made during the interview.

I. The Drawings Satisfy All Formal Requirements

The Office Action, in paragraph 2, objects to the drawings because they do not include certain reference signs mentioned in the description, specifically, number 95 on page 19, line 8. Applicants respectfully submit that Fig. 4 depicts "Another bus 95" between the CPU 66 and the CPU Interface 60. Reconsideration and withdrawal of the objection to the drawings are respectfully requested.

The Office Action, in paragraph 3, objects to the drawings because they include reference signs that are not mentioned in the description, specifically number 110 in Fig. 8. Applicants respectfully submit that reference number 110, referring to a separate bus, is mentioned in the specification at page 19, line 14; page 19, line 24; page 20, line 4; and page 21, line 14. Reconsideration and withdrawal of the objection to the drawings are respectfully requested.

The Office Action, in paragraph 4, objects to Fig. 15 for an informality. Fig. 15 is amended to obviate the objection. Reconsideration and withdrawal of the objection to Fig. 15 are respectfully requested.

During the personal interview, Applicants' representative argued that the subject matter of independent claims 1, 5 and 9, and the claims that depend respectively from those independent claims, was distinguishable from the applied art by noting the differences between the comparative examples depicted in Figs. 9 and 10. Fig. 9 is amended to add a legend to distinguish it from the subject matter of these claims.

II. Claim 9 Satisfies All Formal Requirements

The Office Action, in paragraph 6, objects to claim 9 for an informality. Claim 9 is amended to obviate the objection. Reconsideration and withdrawal of the objection to claim 9 are respectfully requested.

III. Allowable Subject Matter

The Office Action, in paragraph 14, states that claims 11, 12 and 13 contain allowable subject matter. Applicants appreciate this indication of allowability but submit that amended claim 9, from which claims 11, 12 and 13 depend, is allowable for the reasons discussed below. Further, Applicants add claims 28, 29 and 30 which respectively rewrite the original claims 11, 12 and 13 in independent form with all of the features contained in the original claims 9 and 10 from which they depend.

IV. Claim Rejections Under 35 U.S.C. §102

The Office Action, in paragraph 8, rejects claims 1, 2, 9, 14, 16, 17, 19, 20 and 22 under 35 U.S.C. §102(e) as being clearly anticipated by U.S. Patent No. 6,363,428 to Chou et al. (hereinafter "Chou"). This rejection is respectfully traversed.

Chou discloses an interface circuit for sending and receiving communications via a 1394 link (Fig. 2 and col. 6, lines 49-51) that handles data packets which include a data

portion in addition to protocol header information (col. 3, lines 1-2). Chou teaches details regarding handling of such data packets to include storing the data portion in successive memory locations and storing packet headers "in successive locations separately from the data portions" (col. 3, lines 49-52). Chou also teaches "a method for receiving packetized data and separate protocol header information from the content data in the packetized data" (col. 3, lines 64-66). Applicants respectfully submit that the methods disclosed in Chou correspond to the comparative example illustrated in Fig. 9 of this application. Specifically, the data areas of the packet storage memory are not divided into first and second data areas. This data storage scheme necessitates additional processing of the data which precludes application data from being read out consecutively from the data areas. Thus, overhead cannot be reduced significantly, and the actual transfer speed of the data transfer control device cannot be increased significantly.

Independent claims 1 and 9 recite, among other features, a packet division circuit which writes control information of the packet to a control information area of the packet storage memory, writes the first data of the packet for a first layer to a first data area of the packet storage memory, and writes second data of the packet for a second layer that is a layer above the first layer to a second data area of the packet storage memory, wherein the first data is command data used by the protocol of the first layer and the second data is data used by an application layer, and the second data is read sequentially from the second data area and the read second data is transferred to an application layer device. In other words, the subject matter of these claims is directed to data areas that are divided into discrete first data areas and second data areas with the first data and second data respectively written to these separate areas. In this manner, the first (command) data may be successively read out from the first data area, and the second data (for example, stream data used by an application layer) may be successively read out from the second data area to be transferred to an application layer

device. As a result, processing overhead may be reduced, and the actual transfer speed of the data transfer control device may be increased, as compared to the applied art.

The distinctions were highlighted by Applicants' representative during the personal interview. Claims 1 and 9 are amended to clarify the nature of the first data and the second data. Examiners Cleary and Rinehart agreed that "specifying type/functionality of first and second data in claims 1 and 9 ... would distinguish over the applied art."

Applicants respectfully submit that Chou neither teaches nor suggests the subject matter of independent claims 1 and 9, or the dependent claims that depend respectively from claims 1 and 9. Claim 2 is canceled so the rejection to claim 2 is moot. Reconsideration and withdrawal of the rejection to claims 1, 9, 14, 16, 17, 19, 20 and 22 under 35 U.S.C. §102(e) as being anticipated by Chou are respectfully requested.

V. Claim Rejections Under 35 U.S.C. §103

The Office Action, in paragraph 10, rejects claims 1, 2, 9, 14, 16, 17, 19, 20 and 22 under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent No. JP A 10-222440 to Haneda et al. (hereinafter "Haneda") in view of Chou. This rejection is respectfully traversed.

Haneda discloses, generally, a data transfer control device for transferring data between a plurality of nodes connected to a bus (Abstract). Haneda does not teach a packet division means. Therefore, Applicants respectfully submit that Haneda does not overcome the shortfalls of the application of Chou in rejecting the enumerated claims. Reconsideration and withdrawal of the rejection of claims 1, 9, 14, 16, 17, 19, 20 and 22 under 35 U.S.C. §103(a) as being unpatentable over Haneda in view of Chou are respectfully requested.

The Office Action, in paragraph 11, rejects claim 3 under 35 U.S.C. §103(a) as being unpatentable over Chou as applied to claim 1, and further in view of Japanese Patent No. JP 06-069913 to Nakamura et al., (hereinafter "Nakamura"). This rejection is respectfully traversed.

Nakamura is directed to a clock transfer circuit (Abstract) and does not disclose a packet division means. As such, Nakamura does not overcome the shortfall in the application of Chou to independent claim 1. Since claim 3 includes all of the features of claim 1, from which it depends, Applicants respectfully submit that claim 3 can neither be anticipated by, nor rendered obvious over, the applied references individually or in combination.

Reconsideration and withdrawal of the rejection to claim 3 under 35 U.S.C. §103(a) as being unpatentable over Chou in view of Nakamura are respectfully requested.

The Office Action, in paragraph 12, rejects claims 4, 5, 6, 8, 15, 18 and 21 under 35 U.S.C. §103(a) as being obvious over Chou as applied to claim 1, and further in view of U.S. Patent No. 6,115,770 to Gehman and U.S. Patent No. 6,272,114 to Kobayashi. This rejection is respectfully traversed.

Gehman teaches a method of receiving a request for a priority access to a target data storage location (col. 3, lines 20-22), wherein the data in individual data packets comprises "the destination node, the source node, the type of request, the destination address and other information ... [and] includes a transaction label" (col. 5, lines 32-36). Kobayashi teaches that a transaction code field or transaction label in a data packet can provide information regarding "a process to be executed" (col. 5, lines 40-41). Applicants respectfully submit that, with respect to claim 4, the combination of Gehman and Kobayashi do not overcome the shortfalls in the application of Chou to claim 1, from which claim 4 depends. As such, Applicants respectfully submit that claim 4 is not rendered obvious by the combination of the applied references.

Claim 5 recites, among other features, a circuit which performs the processing indicated by the indication information comprised within the transaction identification information of the response packet, wherein control information and data of the response packet are written into separate data areas as specified by the indication information within

the transaction identification information of the response packet, when the response packet from the receiving node is received.

Applicants respectfully submit that nothing in the combination of Chou, Gehman and Kobayashi suggests such a feature for writing separate packet data to separate storage areas as defined. Applicants' representative addressed this argument to Examiners Cleary and Rinehart during the personal interview. The Examiners agreed that "clarifying identification information used to determine storage areas in claim 5 would distinguish over the applied art."

Applicants respectfully submit that independent claim 5, and the dependent claims which depend from claim 5, are neither suggested nor motivated by the combination of the applied references. Reconsideration and withdrawal of the rejection to claims 4, 5, 8, 15, 18 and 21 as being obvious over Chou, and further in view of Gehman and Kobayashi, are respectfully requested.

The Office Action, in paragraph 13, rejects claim 10 under 35 U.S.C. §103(a) as being unpatentable over Chou as applied to claim 9, and further in view of Japanese Patent No. JP 58101544 A to Nishijima and U.S. Patent No. 6,385,113 to Longwell et al. (hereinafter "Longwell"). This rejection is respectfully traversed.

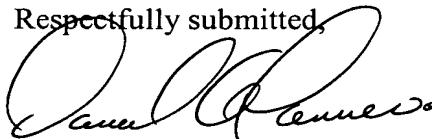
Nishijima teaches a memory area that is divided into a transmission area and a reception area (Abstract) and Longwell teaches a means of storing a first starter address, a second starter address, a first address range, and a second address range (col. 14, lines 23-28). Applicants respectfully submit that neither of these references, either alone or in combination, overcomes the shortfalls in the application of Chou to claim 9. And, as claim 10 includes all of the features of claim 9 from which it depends, Applicants respectfully submit that claim 10 cannot be rendered obvious over the combination of the applied references. Reconsideration

and withdrawal of the rejection to claim 10 under 35 U.S.C. §103(a) as being unpatentable over Chou in view of Nishijima and Longwell are respectfully requested.

VI. Conclusion

Based on the foregoing, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance of claims 1, 3-5 and 7-30 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number set forth below.

Respectfully submitted,


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JAO:DAT/aaw

Attachments:

Drawing Sheets 9/25 and 15/25 (Figs. 9 and 15)

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